ABSTRACT OF THE DISCLOSURE

Methods for adjusting the bulk material properties of manufactured components, such as resistors, capacitors, resonators, oscillators, and optical components. Adjustment of the resistance of a resistor can be achieved by directing a high energy beam, such as an ultraviolet beam, onto a resistor formed from a matrix component and an embedded conductive component. The matrix component can be, for example, a cross-linkable polymer or a sol-gel material. In this case, the embedded conductive component can be carbon particles or a suboxide material, respectively. The high energy beam adjusts the resistivity of the resistor material substantially without ablating the matrix component. Because of the lack of ablation, the material having a property to be adjusted can be a sub-layer in a laminated structure, with the high energy beam being directed through other layers formed thereon.

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